

# JOURNAL OF MYCOLOGY.

Vol. II. MANHATTAN, KANSAS, DECEMBER, 1886. No. 12.

## SYNOPSIS OF THE NORTH AMERICAN HYPOCREACEAE, WITH DESCRIPTIONS OF THE SPECIES.

BY J. B. ELLIS AND B. M. EVERHART.

(Continued from page 125.)

125. *DIALONECTRIA DISPERSA* (C. & E.) Grev. V, p. 33. On (pine)? bark, Maine. Rev. Joseph Blake.

Perithecia widely scattered, ovate, papillate, light red, about one half millim. high, sparingly clothed with pale, weak, glandular hairs; asci cylindrical, 70—80 x 10—12  $\mu$ ; sporidia subbiserial or obliquely uniserial, oblong-elliptical or almond-shaped, often more prominent on one side, 18—22 x 7—10  $\mu$ , ends subacute while lying in the asci, rounded when free, 2—4-nucleate, becoming uniseptate. Cooke finds triseptate, curved conidia 50  $\mu$  long. We have not seen them.

126. *DIALONECTRIA VITICOLA* (B. & C.) Grev. IV, p. 45. "On branches of vine, Alabama. Peters, No. 5225.

"Scattered, bright crimson, soft, collapsing laterally, seated on a thin, white mycelium; sporidia uniserial, elliptical, uniseptate." In Grev. XII, p. 82, Cooke gives the measurements of the sporidia as 10 x 4  $\mu$ .

127. *DIALONECTRIA EUCALYPTI*, Ck. & Hark. Grev. XII, p. 82. On bark of *Eucalyptus* branches, California (Harkness).

Scattered, superficial, pale; perithecia globose, at length subdepressed (2 millim.), at first beset with papillose, hyaline hairs, finally bare; asci clavate, 8-spored; sporidia lanceolate, uniseptate, not constricted, hyaline, 16—18 x 4  $\mu$ .

128. *DIALONECTRIA SQUAMULOSA* (Ell.) Bull. Torr. Bot. Club IX, p. 20. On decaying wood of a fallen limb, Newfield, N. J., November, 1881.

Gregarious, minute (75—100  $\mu$ ), pale, ovate-globose, covered, except the brownish, obtuse, slightly prominent ostiolum, with a light-colored, squam-

ulose coat; asci lanceolate, narrowed and subtruncate above,  $25-30 \times 5-6 \mu$ , containing eight clavate or cylindric-oblong, biseriate sporidia,  $5-6 \times 1\frac{1}{4}-1\frac{1}{2} \mu$ , 2-nucleate at first and probably becoming uniseptate.

(b.) *Growing on herbaceous stems, or leaves, fruits, etc.*

129. *DIALONECTRIA BRASSICÆ* (Ell. & Sac.) Mich. II, p. 374. On dead cabbage stalks left in the ground over winter and on old potato stems, Newfield, N. J., July, 1880 and 1881.

Perithecia densely gregarious, globose-conoid, not collapsing, very small ( $\frac{1}{8}$  millim.), blood-red, ostiolum rather obtuse-conic, texture loosely-cellular, rose-tinted, those around the ostiolum paler; asci clavate-cylindrical,  $60 \times 7-8 \mu$ , without paraphyses, briefly-stipitate, obtuse at the apex, containing eight oblong, subclavate, hyaline, uniseptate,  $10-11 \times 4-4\frac{1}{2} \mu$  sporidia. This was first found on the cabbage stalks and at about the same time next year on old potato stalks lying scattered over the same ground previously occupied by the cabbages. None could be found on any potato stalks in any other part of the field.

130. *DIALONECTRIA THUJANA* (Rehm.) Ascom., No. 338. Sacc. Syll. II, p. 493. On dead foliage of white cedar not yet fallen from the branches of a tree cut some time previously, Newfield, N. J. (November, 1875.) ?

Perithecia very minute, scarcely visible to the naked eye, solitary or 2-3 together, conic-globose, slightly depressed at the apex, purplish-red; asci oblong-elliptical,  $60-80 \times 10-14 \mu$ , with eight biseriate, oblong, two-celled, hyaline sporidia, slightly constricted in the middle and about  $11 \times 7 \mu$ , becoming at length subfuscous.

131. *DIALONECTRIA DEPALENS*, Ck. & Hark. Grev. XII, p. 82. On stems of *Lupinus*, California. Harkness, No. 2432.

Scattered or gregarious, superficial, brick-red, fading out; perithecia subglobose, smooth, bare, opaque (one fifth to one fourth millim.); asci clavate, 8-spored; sporidia lanceolate subacute at each end, uniseptate, not constricted, hyaline,  $22-24 \times 4-4\frac{1}{2} \mu$ .

132. *DIALONECTRIA DEPAUPERATA* (Cke.) Grev. VII, p. 50. On *Yucca aloifolia*, Aiken, So. Car. Ravenel, No. 2564.

Perithecia globose, scarlet, scarcely papillate, 1-3 in a stroma (*Fusarium Yuccæ*); asci clavate; sporidia elliptical, uniseptate,  $10 \times 3\frac{1}{2} \mu$ ; stylospores fusiform, curved, acute at each end,  $25 \times 3 \mu$ . We have never seen the original specimens on *Yucca* and have copied the foregoing from Grevillea.

The specimens in N. A. F., 677, on *Clethra* (or *Andromeda*?) were submitted to Dr. Cooke, who remarked that they did not differ, either in habit or in fruit, from his *Nectria depauperata*, though on a very different host plant. From an examination of these specimens, we add the following notes: Perithecia ovoid-globose, small ( $160-190 \mu$ ), pale and furfuraceous at first, becoming bare and pale red; ostiolum papillate and slightly darker; asci clavate-cylindrical,  $35-40 \times 4 \mu$ , sessile; sporidia oblong-elliptical, subbiserial,  $9-11 \times 3-3\frac{1}{2} \mu$ . There are often six and even ten perithecia on each erumpent, white, byssino-grumose stroma.

133. *DIALONECTRIA GALII*, Plow. & Hark. Trans. Cal. Acad. Sci., 1884, p. 26.

Perithecia scattered, immersed, then erumpent, obtuse, pale-red; asci cylindrical, very delicate,  $60 \times 5-8 \mu$ ; sporidia eight, uniseriate, uniseptate, pale straw-color, oblong-oval, with bluntly-pointed ends. On *Galium trifolium*, California. Harkness.

134. *DIALONECTRIA PECONUM* (B. & C.) Grev. IV, p. 16. *Nectria perpusilla*, B. & C. Rav. Fung. Car. Exsic. IV, p. 51. On dead gourds and on tomato, So. Car. Ravenel.

Very small, scattered, scarlet; sporidia oblong, uniseptate. It looks at first sight as if seated on a smooth, white mycelium, but it is only the external coat of the gourd. Var. *aurelia* (l. c.), having sporidia continuous, is probably only the immature state of the same thing.

We add the following from an examination of the specimen in Ravenel's Exsiccati, above quoted: Perithecia depressed globose,  $100-120 \mu$  in diam., ostiolum broad, papillate; asci clavate-cylindrical,  $35-40 \times 5-6 \mu$ ; sporidia not well matured, but apparently about  $10 \times 3\frac{1}{2} \mu$ .

135. *DIALONECTRIA CONIGENA* (E. & E.) Bull. Torr. Bot. Club X, p. 77. On an old decaying cone of *Magnolia glauca*, Newfield, N. J., October.

Minute, membranaceous, smooth, orange yellow, lighter and collapsing when dry; asci about  $50 \times 7 \mu$ ; sporidia uniseriate or partially biseriate above, acutely elliptical, 2-nucleate, becoming uniseptate,  $7-8 \times 3-3\frac{1}{2} \mu$ ; ostiolum papilliform, minute; perithecia with a few weak, white, radiating hairs at the base. Differs from *N. vulpina*, Cke., in its habitat, smaller and paler perithecia and rather narrower and more acute sporidia.

(c.) Growing on cryptogamous plants.

136. *DIALONECTRIA EPISPHERIA* (Tode.) Fr. Summ. Veg. Scand., p. 388. On various *sphæriaceous* fungi — *Diatrype*, *Hypoxyylon*, *Valsa*, etc. common.

Perithecia gregarious or scattered, superficial, subsphæroid, collapsing and frequently subcompressed, soft, smooth, blood-red, about  $180 \mu$  in diam., with a papilliform ostiolum; asci cylindrical,  $50-60 \times 5-6 \mu$ , 8-spored; sporidia obliquely uniseriate, subellipsoid, rather unequally uniseptate, hyaline, slightly constricted,  $7-10 \times 4-5 \mu$ .

137. *DIALONECTRIA FILICINA*, Ck. & Hark. Grev. XII, p. 101. "On stipes of tree fern, California (Harkness.)

"Scattered or gregarious, orange-colored; perithecia obovate, smooth, glabrous, subshining, scarcely papillate; asci cylindrical, 8-spored; sporidia elliptico-cylindrical, obtuse at each end, hyaline,  $8 \times 2\frac{1}{2} \mu$ ." Our specimens from Dr. Harkness have the asci about  $40 \times 5 \mu$ ; sporidia mostly biseriate, 3-4-nucleate, becoming uniseptate,  $7-10 \times 2\frac{1}{2}-3 \mu$ .

C. Sporidia elongated, guttulate or septate. (*Calonectria*.)



138. *DIALONECTRIA CURTISHI*, Berk. Grev. IV, p. 46. On *Zea*, So. Car. Ravenel.

"Minute, erumpent, scattered; asci lanceolate; sporidia oblong, curved, with four nuclei,  $12 \times 2 \mu$ ." We have seen no specimens of this.

139. *DIALONECTRIA CHLORINELLA*, Cke. Grev. XI, p. 108. Rav. F. Am., 736. On bark of *Ulmus*, seaboard of So. Car. Ravenel.

Scattered, superficial, globose, lemon-yellow; perithecia woolly-tomentose, papillate, with ostiolum bare; asci clavate; sporidia elongated-elliptical, obtuse at each end, straight, or a little curved, 1-3-septate, hyaline,  $18-20 \times 5 \mu$ . This species also ranges northward. It has been found on blackened wood of decaying oak limbs and on wood of *Rhus*, at Newfield, N. J., and has also been sent on rotten wood from Canada by Prof. Macoun. Prof. C. H. Peck has also found it in New York state. It might, with propriety, be placed in the genus *Lophiostoma*, as it has the peculiar compressed ostiolum of that genus and its sporidia are also indicative of that relationship. The specimens in our copy of Rav. F. Am. are immature, though evidently the same as the Newfield and Canada specimens. The latter have the sporidia fusiform, slightly curved, subhyaline, 1-3-septate and constricted at the middle septum.  $25-35 \times 7-8 \mu$ —very few less than  $30 \mu$  long; asci  $100-120 \times 12-15 \mu$ , with abundant paraphyses. Really this should be placed in *Lophiostoma*.

140. *DIALONECTRIA ERUBESCENS* (Desm.) Sacc. Syll. II, p. 545. On the under side of living leaves of *Quercus laurifolia*, *Myrica cerifera* and *Olea Americana*, Florida (Dr. Martin and W. W. Calkins). Mostly on mycelium of *Meliola*.

Scattered or gregarious, superficial, with white, wooley, radiating hairs at base; perithecia minute, pale red, globose, finally collapsing, soft, glabrous, with a papilliform ostiolum; asci clavate,  $35-40 \times 7-8 \mu$ ; sporidia oblong-fusoid, straight or slightly curved, hyaline, 3-4-nucleate, becoming 1-3-septate, ends subacute ( $10 \times 3 \mu$ , Sacc.) Specimens on *Olea* have the sporidia  $12-16 \times 2\frac{1}{2}-3 \mu$ . *Calonectria leucorrhodina* (Mont), Sacc. Syll. II, p. 548, according to So. American specimens from Spegazzini, scarcely differs from this, except in its epiphyllous growth.

141. *DIALONECTRIA DIPLOA*, B. & C., var. *diminuta*. Grev. IV, p. 46. On some sphæria, on alder, So. Car. Ravenel.

"Very minute, scarlet; asci lanceolate, but obtuse; sporidia sometimes larger, binucleate, at length uniseptate, in one row, or smaller, biseriata, quadrinucleate,  $25-30 \mu$  long."

142. *DIALONECTRIA FULVIDA*, E. & E. Journ. Mycol. I, p. 140. On bark of decaying oak limb lying on the ground, Newfield, N. J., Oct. 7th, 1885.

Perithecia superficial, gregarious, subglobose, small (one sixth millim.), tuberculose-squamulose, light yellow, collapsing when dry; ostiolum large, but not prominent; asci oblong-cylindrical, nearly sessile, obtuse, about  $75 \times 10-12 \mu$ , surrounded by indistinct paraphyses;

sporidia eight in an ascus, fusiform, hyaline or nearly so, slightly curved,  $38-50 \times 3-3\frac{1}{2} \mu$ , tapering from the middle to each end, nucleate, becoming about 8-septate. The specimens were growing on the bark of an old swelling caused by *Dichaena strumosa*, Fr.

143. *DIALONECTRIA COCCICOLA*, E. & E. Journ. Mycol. II, p. 39. On scale lice on bark of living orange trees, Florida. Com. Prof. F. L. Scribner.

Perithecia caespitose, membranaceous, about one third millim. in diam. and one half millim. high, flesh-color, becoming dirty buff when mature, obovate, astomous, surface roughish, with a few scattered, white, rudimentary hairs, or at length bald; asci clavate-cylindrical,  $150-190 \times 20 \mu$ , with abundant, rather stout paraphyses; sporidia eight in an ascus, clavate-cylindrical, multinucleate, hyaline,  $110-140 \times 6-7 \mu$  at the upper end, attenuated below. The groups of perithecia are seated either on the shells of dead insects or on the bark itself, with a subiculum more or less distinct, composed of white, decumbent or prostrate hairs of the same character as those found on the perithecia themselves. The species seems to be quite distinct from any of those described under the subgenus *Ophionectria*, where this belongs.

144. *DIALONECTRIA FIBRISIDA*, Schw. Syn. N. Am., 1542. Among the loosened fibres of chestnut bark, Bethlehem, Pa. (Schweinitz). Allied to *Nectria sanguinea*.

Very minute, scattered, blood-red, pellucid, globose-ovate, papillate, adhering in dense clusters to the fibres of (dead) chestnut limbs from which the epidermis has peeled off, entirely glabrous, finally collapsing, scarcely visible to the naked eye. Of this species, nothing is known to us except the description above quoted.

Cooke, in his synopsis, mentions a *Nectria Smilacis*, Sz. We find no such species in Schw. Synopsis.

(To be continued.)

---

## OBITUARY.

With feelings of deepest regret, we have to announce the death of our colleague and friend, Dr. Geo. Martin, who died at his home in West Chester, Pa., Oct. 28th, 1886, in the sixtieth year of his age. Since 1878, Dr. M. has devoted much time to mycological studies, especially to the examination of the parasitic leaf fungi, and only a few days before his death had completed a "Synopsis of the North American Species of *Septoria*," as a continuation of the series of mycological papers he had already contributed. Having been for some years past in constant correspondence with him, we had come to place great reliance on his opinion



in the determination of these often doubtful productions and cannot as yet fully realize how much his advice and assistance will be missed.

The following brief sketch of his life is taken from a West Chester paper:

"Dr. George Martin was born near Claymont, Delaware county, Pa., and received his early education at the Westtown Friends' Boarding School, after which he became a student at the Pennsylvania University, where he graduated in medicine about 1847. He first practiced his profession at Concordville, Delaware county, where he remained about three years. Owing to delicate health, he next became connected with the Fifth Street Dispensary, Philadelphia, in which he remained some five years, at the expiration of which time he engaged with his cousin, John M. Sharpless, in the latter's chrome works in the city of Chester. During the war, he was connected with soldiers' hospitals in Chester, and in which he rendered efficient and untiring services. In 1866 he came to West Chester, where he continued to live until the time of his death. During the last eight or ten years, his health was such as to lead him and his wife to pass the winter season in Florida, they leaving here in the fall and returning late in the spring. This year his disease—that of kidney troubles—became more alarming during the summer, until about ten days ago, when it became evident that he could not survive. At the time of his death, he was one of the managers of the Pennsylvania Training School at Media, also a bright member of the Chester County Medical Society, and during his active practice was a member of the College of Physicians, of Philadelphia.

In his demise, the medical profession loses one of its shining lights, he having devoted many years to schooling himself in the knowledge relating to all that pertained thereto. In scientific pursuits, he was also a close and learned student, as well as a botanist of such note as to lead him into close associations with the leading botanists of the day, his principal study in this department being that of fungi. Dr. Martin was a genial and good citizen. Plain and retiring in his manners, he was beloved by all and honored at home and abroad, and well may it be said that a truly good man has been taken from our midst." J. B. E.

---

## CORRECTIONS.

---

In the "Catalogue of Lichens" (p. 112), occur typographical errors kindly pointed out by Mr. Willey, who is in that article referred to as having identified most of the species. He disclaims responsibility for the list, especially for Nos. 44, 45, 50, 53, 57, 63 and 68. Correct errors as follows: Place a "?" before 18; in 38 change "r" in *Eristathiana* to "u;" in 55 erase final "i" in *Augustinii*; in 69 change "e" in *Mycoperum* to "o."

## INDEX TO VOLUME II.

### General Index.

Amanatine and its Antidote, Charles MacIlvaine.....	7, 21
A New Genus of Myxomycetes, Harold Wingate.....	125
A New Iowa Aecidium, B. D. Halsted .....	52
Banded-spore Trichias, Geo. A. Rex.....	85
Calkins, W. W., Catalogue of Lichens Collected in Florida in 1885— With Notes.....	112
Calkins, W. W., Cryptogamic Botany of a Florida Log.....	53
Calkins, W. W., Notes on Florida Fungi....6, 23, 42, 53, 70, 80, 89, 104, 126	
Calkins, W. W., Polyporus Officinalis, Fries.....	107
Calkins, W. W., The Leaf Fungi of Florida.....	42
Catalogue of Lichens Collected in Florida in 1885—With Notes—W. W. Calkins.....	112
Corrections and Errata.....	11, 71, 106, 119, 138
Cryptogamic Botany of a Florida Log, W. W. Calkins.....	53
Dudley, Wm. R., Charles Christopher Frost.....	114
Dudley, Wm. R., Elias Magnus Fries.....	91
Dudley, Wm. R., Sketch of Curtis.....	54
Ellis, J. B., & Everhart, B. M., Kellermannia, Ell. & Evrht.....	111
Ellis, J. B., & Everhart, B. M., New Species of Fungi from various Localities .....	38, 87, 99
Ellis, J. B., & Everhart, B. M., Supplementary Enumeration of the Cercosporæ.....	1
Ellis, J. B., & Everhart, B. M., Synopsis of the North American Hypocreaceæ.....	28, 49, 61, 73, 98, 109, 121, 133
Ellis, J. B., & Kellerman, W. A., New Kansas Fungi.....	3
Ellis, J. B., & Kellerman, W. A., Two New Species of Cylindrosporium.	81
Ellis, J. B., & Martin, Dr. Geo., New Fungi.....	128
Ellis, J. B., Notes on Peziza.....	44
Ellis, J. B., Notes on Polyporus.....	5
Ellis, J. B., Notes on some Published Species of Fungi.....	43
Ellis, J. B., Phosphorent Fungi .....	70
Ellis, J. B., Uncinula Polychæta.....	52
Everhart, B. M., & Ellis, J. B., Kellermannia, Ell. & Evrht.....	111
Everhart, B. M., & Ellis, J. B., New Species of Fungi from various Localities .....	38, 87, 99
Everhart, B. M., & Ellis, J. B., Synopsis of the North American Hypocreaceæ .....	28, 49, 61, 73, 98, 109, 121, 133



Everhart, B. M., & Ellis, J. B., Supplementary Enumeration of the Cercosporæ.....	1
Errata and Corrections.....	11, 71, 106, 119
Gymnosporium Harknessoides, Ell. & Hol., E. W. D. H.....	52
Halsted, B. D., A New Iowa Aecidium.....	52
Holway, E. W. D., Gymnosporium Harknessoides, Ell. & Hol.....	52
Host-plants of Phyllosticta.....	27
Index of Species of Phyllosticta.....	27
Kellermannia, Ell. & Evrht., J. B. Ellis & B. M. Everhart.....	111
Kellerman, W. A., & Ellis, J. B., New Kansas Fungi.....	3
Kellerman, W. A., & Ellis, J. B., Two New Species of Cyindrosporium.....	81
Kellerman, W. A., New Literature...9, 23, 35, 47, 59, 71, 83, 95, 107, 119, 130	
Kellerman, W. A., Sketch of Schweinitz.....	31
Leaf Fungi of Florida, W. W. Calkins.....	42
MacIlvaine, Charles, Amanitine and its Antidote.....	7, 21
Martin, Dr. Geo., & Ellis, J. B., New Fungi.....	128
Martin, George, The Phyllostictas of North America.....	13, 25
New Fungi, J. B. Ellis and Dr. Geo. Martin.....	128
New Kansas Fungi, J. B. Ellis & W. A. Kellerman.....	3
New Literature, W. A. Kellerman, 9, 23, 35, 47, 59, 71, 83, 95, 107, 119, 130	
New Species of Fungi from various Localities, J. B. Ellis & B. M. Everhart.....	38, 87, 99
Notes on Florida Fungi, W. W. Calkins...6, 23, 42, 53, 70, 80, 89, 104, 126	
Notes on Peziza, J. B. E.....	45
Notes on Polyporus, J. B. Ellis.....	5
Notes on some Published Species of Fungi, J. B. Ellis.....	43
Obituary.....	137
Peters, Thos. M., Sketch of John F. Beaumont.....	81
Phosphorescent Fungi, J. B. E.....	70
Phyllosticta, Host-plants of.....	27
Phyllosticta, Index to Species.....	27
Phyllostictas of North America, George Martin.....	13, 25
Polyporus Officinalis, Fries., W. W. Calkins.....	107
Rex, Geo. A., The Banded-spore Trichias.....	85
Sketch of Charles Christopher Frost, W. R. Dudley.....	114
Sketch of Curtis, Wm. R. Dudley.....	54
Sketch of <del>De</del> Schweinitz, W. A. Kellerman....	31
Sketch of Elias Magnus Fries, Wm. R. Dudley.....	91
Sketch of John F. Beaumont, Thos. M. Peters.....	81
Supplementary Enumeration of the Cercosporæ, J. B. Ellis & B. M. Everhart.....	1
Synopsis of the North American Hypocreaceæ, J. B. Ellis & B. M. Everhart... ..	28, 49, 61, 73, 98, 109, 121, 133
Two New Species of Cyindrosporium, J. B. Ellis & W. A. Kellerman.	81
Uncinula Polychæta, B. & C., J. B. E.....	52
Wingate, Harold, A New Genus of Myxomycetes.....	125

U on Nov 7.



## Index to Described Genera and Species.

	PAGE.		PAGE.
<i>Aecidium alliicolum</i> , Winter	11	<i>Dialonectria filicina</i> , Ck. & Hk.	135
<i>Aecidium amphigenum</i> , E. & K.	4	<i>Dialonectria fulvida</i> , E. & E.	136
<i>Aecidium callirrhoe</i> , E. & K.	4	<i>Dialonectria Galli</i> , Plow. & Hark.	135
<i>Aecidium Phryma</i> , Halsted	52	<i>Dialonectria mycetophila</i> , Pk.	124
<i>Amphisphaeria Hypoxylon</i> , E. & E.	41	<i>Dialonectria Peponum</i> (B. & C.)	134
<i>Amphisphaeria subiculum</i> , E. & E.	103	<i>Dialonectria Pezizae</i> (Tode.) Fr.	124
<i>Asterina minor</i> , E. & E.	42	<i>Dialonectria sanguinea</i> (Sibth.) Fr.	124
<i>Asterina purpurea</i> , E. & M.	128	<i>Dialonectria squamulosa</i> (Ell.)	133
<i>Bummerella</i> , El. Marchel.	59	<i>Dialonectria thujana</i> (Rehm.)	134
<i>Byssonectria</i> , Karsten	123	<i>Dialonectria truncata</i> (Ell.)	125
<i>Byssonectria chrysocoma</i> , Ck. & Hk.	123	<i>Dialonectria Umbellulariae</i> (Pl. & Hk.)	125
<i>Byssonectria fimeti</i> , Cke.	123	<i>Dialonectria viticola</i> (B. & C.)	133
<i>Byssonectria rosella</i> , Ck. & Hk.	124	<i>Dialonectria vulpina</i> , Ck.	124
<i>Cercospora condensata</i> , E. & K.	2	<i>Diaporthe Gladioli</i> , E. & E.	101
<i>Cercospora cruenta</i> , Sacc.	1	<i>Diaporthe Kellermanniana</i> , Winter	100
<i>Cercospora ferruginea</i> , Fekl.	1	<i>Diatrype Comptoniae</i> , E. & E.	89
<i>Cercospora Gaultheria</i> , E. & E.	2	<i>Diatrype Texensis</i> , E. & E.	40
<i>Cercospora gnaphaliaceae</i> , Cke.	1	<i>Diatrypa hysteroidea</i> , E. & E.	99
<i>Cercospora sagittariae</i> , E. & K.	1	<i>Dimerosporium Langloisii</i> , E. & M.	129
<i>Cercospora superflua</i> , Ell. & Hol.	2	<i>Dimerosporium nimbosum</i> , E. & M.	129
<i>Cercospora umbrata</i> , Ell. & Hol.	2	<i>Dimerosporium Spartinae</i> , E. & E.	102
<i>Chaetomella (?) perforata</i> , E. & E.	43	<i>Dimerosporium xylogenum</i> , E. & E.	102
<i>Chilaria Cratagi</i> , Cke.	14	<i>Diplodia frumenti</i> , E. & E.	103
<i>Chromosporium viride</i> , Corda.	43	<i>Diplodia gallae</i> , E. & E.	37
<i>Claviceps</i> , Tul.	28	<i>Didymella prominens</i> , E. & E.	101
<i>Claviceps microcephala</i> (Wallr.)	28	<i>Didymosphaeria pardalina</i> , E. & E.	102
<i>Claviceps purpurea</i> (Fr.) Tul.	28	<i>Dothidea Bumeliae</i> , Schw.	77
<i>Cordyceps</i> , Fries	28	<i>Dothidea rubra</i> (Pers.)	77
<i>Cordyceps acicularis</i> , Rav.	30	<i>Entomophthora Phytonomi</i> , Arthur.	35
<i>Cordyceps armeniaca</i> , B. & C.	29	<i>Epichloe</i> , Fries	50
<i>Cordyceps capitata</i> (Holmsk.)	49	<i>Epichloe typhina</i> (Pers.)	50
<i>Cordyceps clavulata</i> , Schw.	29	<i>Eu-Dialonectria</i>	124
<i>Cordyceps entomorrhiza</i> (Dicks.)	28	<i>Fusaria Acaciae</i> , Ck. & Hk.	98
<i>Cordyceps gryllotalpae</i> , M. A. C.	50	<i>Fusarium Yuccae</i>	134
<i>Cordyceps herculea</i> , Schw.	50	<i>Gibellina</i> , Passer, nov. gen.	130
<i>Cordyceps isarioides</i> , M. A. C.	50	<i>Gleosporium coryli</i> (Desm.)	26
<i>Cordyceps militaris</i> (L.)	30	<i>Gleosporium stenosporum</i> , E. & K.	4
<i>Cordyceps ophioglossoides</i> (Ehr.)	49	<i>Helminthosporium spiculiferum</i> , E. & E.	104
<i>Cordyceps palustris</i> , B. & Br.	29	<i>Hyalostibum</i> , Oudemans	10
<i>Cordyceps Ravenelii</i> , B. & C.	30	<i>Hyphonectria</i>	123
<i>Cordyceps Sphingum</i> , Tul.	31	<i>Hypocrea</i> , Fries	50
<i>Cordyceps stylophora</i> , B. & Br.	29	<i>Hypocrea alutacea</i> (Pers.)	50
<i>Cordyceps superficialis</i> , Pk.	31	<i>Hypocrea armeniaca</i> , B. & C.	64
<i>Cosciniaria</i> , Ell. & Evht., nov. gen.	88	<i>Hypocrea apiculata</i> , C. & P.	65
<i>Cosciniaria Langloisii</i> , E. & E.	88	<i>Hypocrea atramentosa</i> , B. & C.	68
<i>Cylindrocolla cylindrophora</i> , E. & E.	39	<i>Hypocrea chlorina</i> , Cke.	67
<i>Cylindrosporium angustifolium</i> , E. & K.	81	<i>Hypocrea chromosperma</i> , C. & P.	63
<i>Cylindrosporium Tradescantiae</i> , E. & K.	81	<i>Hypocrea citrina</i> (Pers.)	64
<i>Cyphella subcyanea</i> , E. & E.	37	<i>H. citrina</i> (Pers.) var. <i>fungicola</i> , Karst.	64
<i>Dacrymyces corticioides</i> , var. <i>canigena</i> , E. & E.	87	<i>Hypocrea citrinella</i> , Ell.	66
<i>Depazea Batatas</i> , Thuem.	20	<i>Hypocrea consimilis</i> , Ell.	65
<i>Dialonectria</i> , Sacc.	124	<i>Hypocrea contorta</i> , Schw.	51
<i>Dialonectria Brassicae</i> , Ell. & Sacc.	134	<i>Hypocrea corticicola</i> , E. & E.	65
<i>Dialonectria chlorinella</i> (Cke.)	136	<i>Hypocrea cubispora</i> , Ell. & Hol.	64
<i>Dialonectria coccicola</i> , E. & E.	137	<i>Hypocrea digitata</i> , Ell. & Hol.	66
<i>Dialonectria conigena</i> , E. & E.	135	<i>Hypocrea gelatinosa</i> (Tode.)	63
<i>Dialonectria Curtissii</i> , Berk.	136	<i>H. gelatinosa</i> , var. <i>viridis</i> (Tode.)	63
<i>Dialonectria depallens</i> , Ck. & Hk.	134	<i>Hypocrea Hypoxylon</i> , Pk.	67
<i>Dialonectria depauperata</i> (Cke.)	134	<i>Hypocrea lactea</i> , Fr.	64
<i>Dialonectria diploa</i> , B. & C., var. <i>diminuta</i>	136	<i>Hypocrea lati-zonata</i> , Pk.	63
<i>Dialonectria dispersa</i> (C. & E.)	133	<i>Hypocrea lenta</i> (Tode.)	51
<i>Dialonectria episphearia</i> (Tode.)	135	<i>Hypocrea lenta</i> , Schw.	61
<i>Dialonectria erubescens</i> , Desm.	136	<i>Hypocrea minima</i> , Sacc. & Ell.	62
<i>Dialonectria Eucalypti</i> , Ck. & Hk.	133	<i>Hypocrea molliuscula</i> , Schw., Fr.	69
<i>Dialonectria fibriseda</i> , Schw.	137	<i>Hypocrea ocephalea</i> , B. & Rav.	64
		<i>Hypocrea olivacea</i> , C. & E.	62

PAGE.	PAGE.
<i>Hypocrea pallida</i> , E. & E. .... 65	<i>Nectria Canadensis</i> , E. & E. .... 122
<i>Hypocrea papyracea</i> , Ell. & Hol. .... 66	<i>Nectria Celastri</i> , Schw. .... 97
<i>Hypocrea parisiensis</i> , B. & C. .... 68	<i>Nectria cinnabarinata</i> , Tode. .... 78
<i>Hypocrea patella</i> , C. & P. .... 62	<i>Nectria coccicola</i> , E. & E. .... 39
<i>Hypocrea phyllogena</i> , Mont. .... 67	<i>Nectria coccinea</i> , Pers. .... 79
<i>Hypocrea polyporioides</i> , B. & C. .... 65	<i>Nectria Coryli</i> , Fekl. .... 78
<i>Hypocrea Ravenelii</i> , B. .... 66	<i>Nectria cucurbitula</i> , Curr. .... 77, 109
<i>Hypocrea Richarsonii</i> , Berk. & Mont. .... 62	<i>Nectria dematioides</i> , Schw. .... 110
<i>Hypocrea rigens</i> , Fr. .... 61	<i>Nectria diploa</i> , B. & C. .... 110
<i>Hypocrea rufa</i> (Pers.) .... 51	<i>Nectria ditissima</i> , Tul. .... 80
<i>Hypocrea Schweinitzii</i> , Fr. .... 51	<i>Nectria inaurita</i> , B. & Br. .... 78
<i>Hypocrea scutellæformis</i> , B. & Rav. .... 61	<i>Nectria infusaria</i> , Ck. & Hk. .... 98
<i>Hypocrea solenostoma</i> , B. & Rav. .... 63	<i>Nectria microspora</i> , C. & E. .... 97
<i>Hypocrea Stereorum</i> , Schw. .... 62	<i>Nectria muscivora</i> , Berk. .... 110
<i>Hypocrea sterilior</i> , Schw. .... 68	<i>Nectria nigrescens</i> , Cke. .... 99
<i>Hypocrea sublobata</i> , Schw. .... 68	<i>Nectria ochroleuca</i> , Schw. .... 121
<i>Hypocrea subviridis</i> , B. & C. .... 68	<i>Nectria offuscata</i> , B. & C. .... 80
<i>Hypocrea sulfurea</i> , Schw. .... 64	<i>Nectria perpusilla</i> , B. & C. .... 135
<i>Hypocrea tuberiformis</i> , B. & Rav. .... 68	<i>Nectria poliosa</i> , E. & E. .... 39
<i>Hypocrea viridirufa</i> , B. & Rav. .... 63	<i>Nectria polythalamia</i> , Berk. .... 122
<i>Hypocreaceae</i> , De Notaris. .... 28	<i>Nectria rhizogena</i> , Cke. .... 109
<i>Hypocrella</i> , Sacc. .... 67	<i>Nectria Ribis</i> , Tode. .... 79
<i>Hypocreoides</i> .... 23	<i>Nectria rubicarpa</i> , Cke. .... 79
<i>Hypomyces</i> , Fries. .... 69	<i>Nectria Russellii</i> , B. & C. .... 80
<i>Hypomyces apiosporus</i> , Cke. .... 69	<i>Nectria tremelloides</i> , E. & E. .... 121
<i>Hypomyces asterophorus</i> , Tul. .... 75	<i>Nectria verrucosa</i> , Schw. .... 80
<i>Hypomyces aurantius</i> , Pers. .... 74	<i>Nectriella</i> .... 124
<i>Hypomyces Banningii</i> , Pk. .... 69	<i>Orthotricha</i> , Wingate, nov. gen. .... 125
<i>Hypomyces boleticola</i> , Schw. .... 76	<i>Orthotricha microcephala</i> , Wingate. .... 125
<i>Hypomyces flavescens</i> , Schw. .... 76	<i>Periconia lateralis</i> , E. & E. .... 104
<i>Hypomyces Geoglossi</i> , E. & E. .... 73	<i>Pestalozzia primaria</i> , E. & E. .... 103
<i>Hypomyces hyalinus</i> , Schw. .... 73	<i>Pestalozzia suffocata</i> , E. & E. .... 38
<i>Hypomyces insignis</i> , B. & C. .... 75	<i>Peziza heteromorpha</i> , E. & E. .... 88
<i>Hypomyces lactifluorum</i> , Schw. .... 74	<i>Phyllosticta</i> , Pers. .... 13
<i>Hypomyces lateritius</i> , Fr. .... 74	<i>Phyllosticta abortiva</i> , E. & K. .... 13
<i>Hypomyces ochraceus</i> , Pers. .... 75	<i>Phyllosticta acercola</i> , Cke. & Ell. .... 13
<i>Hypomyces pannosus</i> , Schw. .... 76	<i>Phyllosticta adusta</i> , E. & M. .... 130
<i>Hypomyces polyporinus</i> , Pk. .... 69	<i>Phyllosticta Aesculi</i> , E. & M. .... 130
<i>Hypomyces rosellus</i> (A. & S.) .... 74	<i>Phyllosticta affinis</i> , E. & K. .... 13
<i>Hypomyces tegillum</i> , B. & C. .... 76	<i>Phyllosticta Amaranti</i> , E. & K. .... 19
<i>Hypomyces tomentosus</i> , Fr. .... 75	<i>Phyllosticta Ampelopsidis</i> , E. & M. .... 14
<i>Hypomyces transformans</i> , Pk. .... 73	<i>Phyllosticta Apocyni</i> , Trel. .... 19
<i>Hypomyces tuberculata</i> , Schw. .... 76	<i>Phyllosticta Asimina</i> , E. & K. .... 14
<i>Hypomyces Van Bruntianus</i> , Ger. .... 69	<i>Phyllosticta Astragali</i> , Pk. .... 19
<i>Hypomyces viridis</i> (A. & S.) .... 69	<i>Phyllosticta Batatas</i> , Cke. .... 20
<i>Hypomyces xylophilus</i> , Pk. .... 73	<i>Phyllosticta bataticola</i> , E. & M. .... 20
<i>Hypoxylon bicolor</i> , E. & E. .... 88	<i>Phyllosticta Catalpæ</i> , E. & M. .... 14
<i>Isariopsis subulata</i> , E. & E. .... 104	<i>Phyllosticta Chenopodii</i> , West. .... 20
<i>Kellermannia</i> , Ellis & Eyrh. .... 111	<i>Phyllosticta circumvallata</i> , Wint. .... 14
<i>Kellermannia Polygoni</i> , E. & E. .... 111	<i>Phyllosticta clethricola</i> , E. & M. .... 14
<i>Kellermannia Sisyriuchii</i> , E. & E. .... 111	<i>Phyllosticta cornicola</i> (DC.) Rabb. .... 14
<i>Leptosphaeria cassiicola</i> , E. & E. .... 41	<i>Phyllosticta Cornuti</i> , E. & K. .... 20
<i>Leptosphaeria pyrenopezoides</i> , Sacc. & Speg. .... 3	<i>Phyllosticta corallina</i> , E. & M. .... 26
<i>Libertella rubra</i> , Bon. .... 77	<i>Phyllosticta Crataegi</i> (Cke.) Sacc. .... 14
<i>Lophistoma Floridanum</i> , E. & E. .... 40	<i>Phyllosticta cruenta</i> , Fr. .... 20
<i>Lophistoma heterostomum</i> , E. & E. .... 99	<i>Phyllosticta Cydriæ</i> , E. & M. .... 130
<i>Lophistoma subcollapsa</i> , E. & E. .... 100	<i>Phyllosticta decidua</i> , E. & K. .... 20
<i>Melanconis dasycarpa</i> , E. & K. .... 3	<i>Phyllosticta Dodecathele</i> , Trel. .... 25
<i>Melanconium salicinum</i> , E. & E. .... 103	<i>Phyllosticta Fraxini</i> , E. & M. .... 15
<i>Melanconium triangulare</i> , E. & E. .... 38	<i>Phyllosticta Garryæ</i> , Cke. & Hk. .... 15
<i>Melanopsamma cupressinum</i> , E. & E. .... 103	<i>Phyllosticta Gaultheriæ</i> , E. & E. .... 25
<i>Meliola sanguinea</i> , E. & E. .... 42	<i>Phyllosticta glauca</i> , Cke. .... 15
<i>Mollerella</i> , Winter, nov. gen. .... 83	<i>Phyllosticta Gordonæ</i> , E. & M. .... 15
<i>Monacrosporium</i> , Oudemans .... 10	<i>Phyllosticta gossypina</i> , E. & M. .... 129
<i>Mycogene cervina</i> , Ditm. .... 76	<i>Phyllosticta grossulariæ</i> , Sacc. .... 15
<i>Myxosporium subviride</i> , E. & E. .... 103	<i>Phyllosticta Hamamelidis</i> , Cke. .... 15
<i>Nectria</i> , Fries. .... 77	<i>Phyllosticta Heteromeles</i> , Cke. & Hk. .... 15
<i>Nectria Apocyni</i> , Pk. .... 110	<i>Phyllosticta innumera</i> , Cke. & Hk. .... 25
<i>Nectria atrofusca</i> , Schw. .... 98	<i>Phyllosticta ivæcola</i> , E. & E. .... 37
<i>Nectria aureofulva</i> , C. & E. .... 98	<i>Phyllosticta Labruscæ</i> , Thum. .... 15
<i>Nectria aurigera</i> , B. & Rav. .... 122	<i>Phyllosticta Lappæ</i> , Sacc. .... 25
<i>Nectria balsamea</i> , C. & P. .... 122	<i>Phyllosticta Leucothoes</i> , E. & M. .... 16
<i>Nectria Berolinensis</i> , Sacc. .... 123	<i>Phyllosticta lirioidendrica</i> , Cke. .... 16
	<i>Phyllosticta Ludoviciana</i> , E. & M. .... 130



	PAGE.
Phyllosticta Lycii, E. & K.....	16
Phyllosticta Magnoliae, Sacc.....	16
Phyllosticta Mentzeliae, E. & K.....	3, 19
Phyllosticta micropuncta, Cke.....	16
Phyllosticta Myricae, Cke.....	16
Phyllosticta Nerii, West.....	16
Phyllosticta Nesaea, Pk.....	25
Phyllosticta Nysse, Cke.....	17
Phyllosticta Oleae, E. & M.....	17
Phyllosticta Orontii, E. & M.....	25
Phyllosticta Persea, E. & M.....	17
Phyllosticta phaseolina, Sacc.....	25
Phyllosticta phomiformis, Sacc.....	17
Phyllosticta Phytolaccae, Cke.....	26
Phyllosticta Persica, Sacc.....	14
Phyllosticta Platani, S. & S.....	17
Phyllosticta Podophylli, Winter.....	26
Phyllosticta pyrina, Sacc.....	17
Phyllosticta Pyrorum, Cke.....	17
Phyllosticta Quercus-rubrae, Ger.....	18
Phyllosticta saecharina, E. & M.....	130
Phyllosticta Sanguinariae, Winter.....	26
Phyllosticta Sassafras, Cke.....	18
Phyllosticta serotina, Cke.....	18
Phyllosticta sinuosa, E. & M.....	18
Phyllosticta Solani, E. & M.....	26
Phyllosticta sphærospoidea, E. & E.....	18
Phyllosticta terminalis, E. & M.....	18
Phyllosticta toxica, E. & M.....	19
Phyllosticta Toxicodendri, Thuem.....	19
Phyllosticta tuberosa, E. & M.....	26
Phyllosticta verbascicola, E. & K.....	26
Phyllosticta verbenicola, Martin.....	26
Phyllosticta vesicatoria, Thuem.....	19
Phyllosticta Viola, Desm.....	26
Phyllosticta viticola, Thuem.....	19
Phyllosticta vulgaris, Desm.....	19
Pleonectria, Sacc.....	123
Pleospora Cassiae, E. & E.....	41

	PAGE.
Polyporus dependens, B. & C.....	5
Polyporus flavovirens, B. & Rav.....	5
Polyporus frondosus.....	5
Polystigma, Persoon.....	76
Polystigma (?) Bumeliae, Schw.....	77
Polystigma rubrum (Pers.) DC.....	77
Rhizoctonia carnea, E. & E.....	39
Sclerotium clavus (DC.).....	28
Septoria glauca, Cke.....	15
Septoria Mentzeliae, E. & K.....	3
Septoria Symphoricarpi, E. & E.....	38
Septoria viticola, Theum.....	19
Sphaerella granulata, E. & E.....	102
Sphaerella leucophaea, E. & K.....	3
Sphaerella sabaligena, E. & E.....	101
Sphaerella Sapindi, E. & E.....	101
Sphaerella similacina, E. & E.....	101
Sphaerella subcongregata, E. & E.....	101
Sphaeria subvestita, E. & E.....	100
Sphaeria tumefaciens, E. & E.....	41
Sphaeropsis minima, B. & C.....	13
Sporidesmium helicoides, E. & E.....	38
Sporidesmium inquinans, E. & E.....	38
Stagorospora virens, E. & M.....	129
Sterigmatocystis dasytricha, E. & E.....	104
Stilbum macrocarpon, E. & E.....	103
Thelephora floridana, E. & E.....	37
Trachia affinis, DeBy.....	85
Trichia chrysosperma, Bull.....	85
Trichia Jackii, Rostfki.....	85
Tubercularia pezizoidea, Schw.....	62
Uncinula polychæta, B. & C.....	43, 52
Uromyces affinis, Winter.....	11
Uromyces pulcherrimus, B. & C.....	44
Valsa nyloides, E. & E.....	40
Venturia occidentalis, E. & E.....	43
Verticillium agaricinum, Cda.....	75
Xyloma rubrum, Pers.....	77

## INDEX OF HOST-PLANTS.

	PAGE.
Abies balsamea.....	77, 109, 122
Abutilon holosericea.....	44
Acacia.....	80, 88
Acer.....	13
Acer dasycarpum.....	3
Acer rubrum.....	61, 66
Acer saccharinum.....	130
Aesculus glabra.....	130
Aesculus Hippocastanum.....	18
Agaric.....	69
Agaricus.....	75
Agaricus alutaceus.....	69
Alder.....	63, 110, 136
Allium stellatum.....	11
Amarantus retroflexus.....	16
Ambrosia trifida.....	101
Ampelopsis quinquefolia.....	14
Andropogon.....	63
Apocynum cannabinum.....	20
Apple tree.....	124
Artemisia Californica.....	41
Artemisia Ludoviciana.....	43
Arundinaria.....	68
Asclepias cornuti.....	20
Asclepias tuberosa.....	26, 110
Asimina triloba.....	14

	PAGE.
Asterophora hemispherica.....	76
Asterophora Pezizae.....	76
Astragalus.....	19
Azalea viscosa.....	65
Baptisia granulata.....	102
Baptisia leucophaea.....	4
Batatas.....	20
Bark.....	51, 63, 64
Beech.....	65
Bidens.....	2
Birch.....	103
Bird-dung.....	29
Bumelia oblongifolia.....	77
Cabbage stalks.....	134
Callirrhoe involuerata.....	4
Cantarea Cayenne.....	67
Cantharellus cibarius.....	73, 75
Carex.....	50
Carpinus Americana.....	38
Cassia.....	41
Catalpa bignonioides.....	14
Cedar.....	103, 125, 134
Celastrus.....	97
Celtis occidentalis.....	52
Cerasus serotina.....	18
Chenopodium album.....	20



	PAGE.		PAGE.
Chestnut.....	134	Leonurus cardiaca.....	20
Chionanthus.....	122	Leucothoes acuminata.....	16
Cirsium discolor.....	43	Limbs.....	66
Clavaria pistillaris (?).....	69	Limbs (of Tilia?).....	40
Clethra alnifolia.....	14, 134	Liriodendron Tulipifera.....	14, 16
Comptonia asplenifolia.....	89	Logs.....	40, 66, 74
Convolvulus.....	20	Lonicera.....	19
Corvus.....	14	Lupinus.....	134
Cotton plant.....	129	Lycium vulgare.....	16
Cow-dung.....	123	Magnolia.....	80
Crategus.....	14	Magnolia glauca.....	15, 62, 65, 98, 135
Cyathus striatus.....	63	Magnolia grandiflora.....	16
Cypress wood.....	103	Maple.....	13, 50
Cyrtilla racemiflora.....	130	Melia.....	80
Dactylis glomerata.....	50	Meliola.....	138
Dead limbs.....	37	Meliola Niessleana.....	11
Dead stems.....	3	Menispermum Canadense.....	13
Dead twigs.....	42	Mentzelia nuda.....	4, 19
Decaying Fungi.....	69, 74, 124	Morus.....	80, 110
Decaying limb.....	50	Moths.....	30, 31, 50
Decaying log.....	64	Myrica cerifera.....	16, 136
Decaying wood.....	73, 104, 124, 133	Nereum Oleander.....	16
Dianthera humilis.....	129	Nesaea verticellata.....	25
Diatrype.....	135	Nyctalis.....	75
Diatrype platystoma.....	39	Nyssa capitata.....	17
Diatrype stigma.....	40	Nyssa multiflora.....	100
Dodecatheon meadia.....	25	Oak limbs.....	138
Dolichos.....	1	Oak plank.....	38
Dung of birds.....	29	Oak barrel bottom.....	99
Elaphomyces granulatus.....	49	Oak galls.....	37
Elaphomyces muricatus.....	49	Olea Americana.....	17, 18, 128, 136, 137
Elm.....	122	Orange.....	130
Erigeron tomentosum.....	1	Orontium aquaticum.....	25
Eucalyptus.....	123, 133	Ostrya Virginica.....	66
Fern.....	135	Pachyma cocos.....	63
Fir.....	51	Palmetto.....	37, 101, 104
Fraxinus.....	2, 15, 123	Peach leaves.....	14
Galium trifolium.....	135	Pear leaves.....	17
Galls.....	37	Persea Caroliniensis.....	16, 17
Garrya elliptica.....	15	Peziz.....	76
Gaultheria procumbens.....	2, 25	Phaseolus.....	1
Gelsemium.....	79	Phaseolus diversifolius.....	25
Geoglossum (glabrum?).....	73	Phleum pratense.....	50
Gladiolus.....	101	Phragmites communis.....	28
Gleditschia.....	99	Phryma leptostachya.....	52
Gleditschia triacanthos.....	2	Phytolacca decandra.....	26
Gnaphalium.....	1	Phytonomus punctatus.....	35
Gooseberry twigs.....	79	Pine.....	76
Gordonia Lasianthus.....	15	Pine logs.....	39, 133
Gourds.....	135	Pine wood.....	62, 64
Gramineæ.....	28	Pinus palustris.....	59
Grass.....	67, 68, 124	Pinus rigida.....	77, 87
Ground.....	64, 65, 74	Pinus Strobus.....	77, 107
Hamamelis Virginica.....	15	Platanus.....	37, 68, 110
Helvella.....	76	Podophyllum peltatum.....	26
Herbaceous stems.....	103	Polygonum polymorphum.....	111
Heteromeles.....	15	Polyporus.....	76
Hibiscus.....	80	Polyporus caesus.....	65
Hickory.....	67	Polyporus citrinus.....	76
Hydnum erinaceum.....	68	Polyporus Curtisii.....	62
Hypoxis erecta.....	11	Polyporus medulla-panis.....	64
Hypoxylon.....	41, 135	Polyporus versicolor.....	69
Ilex Dahoon.....	18	Poplar.....	62, 99, 103
Iva frutescens.....	37	Populus grandidentata.....	4
Keria Japonica.....	122	Potato stems.....	134
Lachnosterna fusca.....	30	Prunus domestica.....	77
Lactarius.....	74	Prunus serotina.....	18
Lactarius Indigo.....	74	Prunus spinosa.....	77
Lactarius piperatus.....	74	Pupe of moths.....	30
Lappa major.....	25	Pyrus.....	17
Larvæ of insects.....	28, 29, 30, 35	Pyrus arbutifolia.....	129
Laurus Benzoin.....	121	Quercus alba.....	17
Leaves of (?).....	25	Quercus aquatica.....	130
Lecanium.....	29	Quercus cinerea.....	19

	PAGE.
<i>Quercus laurifolia</i> .....	136
<i>Quercus rubra</i> .....	18
<i>Quercus virens</i> .....	88, 129
Red cedar.....	103
<i>Rhus Toxicodendron</i> .....	19
<i>Ribes</i> .....	123
<i>Ribes Grossularia</i> .....	15
Rose leaves.....	38
Rotten wood.....	43, 64, 69, 76, 103
<i>Rubus trivialis</i> .....	42
<i>Russula foetens</i> .....	73
Rye.....	28
<i>Sabal palmetto</i> .....	37, 101, 104
<i>Sagittaria variabilis</i> .....	1
<i>Salix</i> .....	102
<i>Salix nigra</i> .....	103
<i>Sanguinaria Canadensis</i> .....	26
Sand moles.....	50
<i>Sapindus marginatus</i> .....	101
Sassafras.....	13, 18, 80
Scale insects.....	29
Scale lice.....	39, 137
Scales of pine cones.....	87
<i>Scirpus fluviatilis</i> .....	103
<i>Scleroderma</i> .....	49
Shrubs.....	2
<i>Sisyrinchium bellum</i> .....	111
<i>Smilacina racemosa</i> .....	20
<i>Smilax</i> .....	101, 129
<i>Solanum</i> .....	26

	PAGE.
<i>Spartina polystachya</i> .....	88, 102
<i>Sphaeria</i> .....	136
Sphaeriaceous fungi.....	135
<i>Staphylea trifolia</i> .....	99
Stems.....	3
<i>Stereum</i> .....	74
<i>Symphoricarpos</i> .....	38
Tomato.....	135
<i>Tradescantia Virginica</i> 78,.....	81
Trees.....	78, 79, 121
Tree fern.....	135
<i>Ulmus</i> .....	109, 122, 136
<i>Umbellularia</i> .....	125
<i>Vaccinium</i> .....	100
<i>Vaccinium corymbosum</i> .....	66
Valsa.....	110, 135
<i>Verbascum Thapsus</i> .....	26
<i>Verbena hastata</i> .....	26
<i>Vigna luteola</i> .....	88
<i>Viola cucullata</i> .....	26
<i>Vitis Labruscæ</i> .....	15
<i>Vitis vulpina</i> .....	19
White cedar.....	125, 134
"White tuber".....	76
Willow.....	41, 121
Wood.....	51, 61, 63, 64
<i>Yucca alifolia</i> .....	134
<i>Yucca angustifolia</i> .....	81
<i>Zea Mays</i> .....	100, 103, 104, 136

